



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/876,276	06/16/1997	JAY SHORT	DIVER1280	4852

29062 7590 06/02/2005

DIVERSA CORPORATION  
4955 DIRECTORS PLACE  
SAN DIEGO, CA 92121

EXAMINER

STEADMAN, DAVID J

ART UNIT	PAPER NUMBER
----------	--------------

1652

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

08/876,276

Applicant(s)

SHORT ET AL.

Examiner

David J. Steadman

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-41 and 43-46 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 19-41 and 43-46 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 16 June 1997 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/7/2003.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

RD

## **DETAILED ACTION**

### ***Status of the Application***

- [1]** Claims 19-41 and 43-46 are pending in the application.
- [2]** Applicants' amendment to the claims, filed 4/1/2005, is acknowledged. This listing of the claims replaces all prior versions and listings of the claims.
- [3]** Applicants' amendment to the specification, filed 4/1/2005, is acknowledged.
- [4]** Applicant's arguments filed 4/1/2005 have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.
- [5]** The text of those sections of Title 35, U.S. Code not included in the instant action can be found in a prior Office action.

### ***Information Disclosure Statement***

- [6]** Upon review of the application file, the examiner has identified an Information Disclosure Statement (IDS) filed 8/7/2003 that does not appear to have been considered by the examiner. A copy of the corresponding Form PTO-1449 is attached to the instant Office action.

### ***Specification/Informalities***

- [7]** The amendment filed 4/1/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material

which is not supported by the original disclosure is as follows: incorporation by reference of co-pending US application 08/665,565. MPEP 608.01(p) makes clear that "[m]ere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph" and that "[f]or the incorporation by reference to be effective as a proper safeguard, the incorporation by reference statement must be filed at the time of filing of the later-filed application. An incorporation by reference statement added after an application's filing date is not effective because no new matter can be added to an application after its filing date."

Applicant is required to cancel the new matter in the reply to this Office Action.

[8] The status of nonprovisional parent application(s) (whether patented or abandoned) disclosed in the instant specification should be updated. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application. See particularly the reference to application 08/665,565 in the amendment filed 4/1/2005.

***Claim Rejections - 35 USC § 112, Second Paragraph***

[9] The rejection of claim 19 (claims 20-41 and 43-46 rejected as being dependent therefrom) as being unclear in the recitation of "normalizing the representation of

organisms" (§ 7) part [a] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' amendment to the claim.

**[10]** The rejection of claim 19 (claims 20-41 and 43-46 rejected as being dependent therefrom) as being incomplete (§ 7) part [b] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' clarification of the meaning of the term "normalizing."

**[11]** The rejection of claim 19 (claims 20-41 and 43-46 rejected as being dependent therefrom) as being incomplete (§ 7) part [c] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' amendment to the claim.

**[12]** The rejection of claim 19 (claims 20-41 and 43-46 dependent therefrom) as being indefinite in the recitation of "naturally occurring DNA" (§ 7) part [d] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' clarification of the term. In the previous response it appeared that applicants intended for DNA that is "without manipulation" and/or that has not been recombined (see p. 8 of the response filed February 09, 2004) to be "naturally occurring." Such DNA that is without manipulation or that is non-recombinant would exclude, e.g., genomic DNA that has been manipulated and recombined to create a genomic DNA library. However, applicants clarify this term as encompassing genomic DNA that has been manipulated but is otherwise identical to the corresponding DNA that occurs in nature. Applicants define "naturally occurring" as "as found in nature."

**[13]** The rejection of claim 40 as being confusing in the recitation of "a clone identified in step c)" (§ 7) part [e] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' amendment to the claim.

***Claim Rejections - 35 USC § 112, First Paragraph***

**[14]** The new matter rejection of claims 19-41 and 43-46 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement (¶¶ [8] and [9] of the Office action mailed 10/1/2004) is withdrawn in view of applicants' showing of support for the claimed limitation. As support for "naturally occurring DNA" encompassing DNA from any eukaryotic organism, applicants cite p. 17, lines 20-28 of the specification, which states (in relevant part) "genomes of naturally occurring organisms." Applicants argue an environmental sample from which the DNA is extracted could contain DNA from any organism, including a eukaryotic organism and not just lower eukaryotes, which is disclosed as a specific embodiment (p. 22, bottom). To the extent the statement regarding genomes of naturally occurring organisms encompasses any naturally occurring organisms and is not limited to prokaryotic or lower eukaryotic organisms, the examiner agrees with applicants' argument. It should be noted that the examiner previously indicated that "naturally occurring DNA" encompassed those DNAs that are both genomic and non-genomic, using cDNA as an example. However, it is noted that a cDNA does not naturally occur in a eukaryotic organism and is instead a product of reverse transcription using mRNA as a template.

**[15]** The new matter rejection of claims 19-41 and 43-46 under 35 U.S.C. 112, first paragraph, is maintained for the reasons of record (¶¶ [10] and [11] of the Office action mailed 10/1/2004 and ¶ [10] of the Office action mailed 4/6/2004) and for the reasons stated below.

**RESPONSE TO ARGUMENTS:** Applicants argue support for the limitation “wherein each clone contains DNA from a single organism” can be found in the specification at page 29, lines 2-24, which describes cloning of DNA fragments, wherein the process “lowers the probability of two DNA molecules ligating together to create a chimeric clone.”

Applicants' argument is not found persuasive. It is unclear to the examiner as to how the disclosure of a method for cloning DNA fragments using blunt-ended DNA such that the method “lowers the probability of two DNA molecules ligating together to create a chimeric clone” provides implicit or explicit support for a method step of “contacting a bioactive substrate that is fluorescent...with a plurality of clones...wherein each clone contains DNA from a single organism.” Applicants are invited to show support for the limitation at issue.

***Claim Rejections - 35 USC § 102***

**[16]** The rejection of claims 19-20, 22, 24-29, 35, 37-39, and 43-45 under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (US Patent 5,824,485) is maintained for the reasons of record (¶¶ [12] and [13] of the Office action mailed 10/1/2004 and ¶ [11] of the Office action mailed 4/6/2004) and for the reasons stated below.

**RESPONSE TO ARGUMENTS:** Applicants argue the claimed methods distinguish over Thompson et al. by requiring a step of normalizing as recited in step a) of claim 19. Applicants argue Thompson et al. is silent regarding “normalizing” DNA as described by the instant application (p. 24, lines 11-22). Applicants argue that

Thompson's step of normalizing would not achieve the effect of equal representation of the DNA" as Thompson et al. teach that one can discard the largest amounts of ribosomal RNA, which allegedly contrasts with applicants' method, which does not discard the samples containing the largest amounts of representative nucleic acid. Applicants argue that Thompson et al. fails to disclose "any procedure by which the complexity of the DNA population isolated is analyzed and treated in such a way that *equalization* in copy numbers of clones in the mixed population is attained" (emphasis in original).

The examiner acknowledges that the teaching of Thompson et al. to discard the ribosomal RNAs does not appear to be an attempt to normalize the representation of organisms to allow equal representation of the DNA from all of the organisms in the sample as recited in claim 19 as amended. However, applicants' argument is not found persuasive. A review of the teachings of Thompson et al. reveals that Thompson et al. does teach a method for normalizing the representation of organisms. Thompson et al. recognize that some organisms will likely be under-represented by teaching that "...it is unlikely that all donor organisms in an environmental sample may be propagated at the same rate, if at all under laboratory conditions, some of the donor organisms may overgrow and lead to the loss or dilution of slow-growing organisms" (column 14, lines 46-50). Thompson et al. teach that "[t]he availability of high quality DNA or RNA as starting material is important in the construction of *DNA libraries that are representative of the genetic information of the donor organisms* (emphasis added; column 49, lines 53-56) and suggest a method for increasing the availability of those DNAs whose



Art Unit: 1652

quantities are low as follows: “[w]hen preparing a combinatorial expression library from DNA extracted from environmental samples, the quantity of available DNA is often limited, and is a consideration in the selection of ligation strategy” and “[i]f the quantity is low after extraction or concatenation...the DNA may be ligated into a high-efficiency cloning system e.g., SuperCos, as described in Section 5.1.3. The inserts in the clones are amplified and are released from the vector by restriction enzyme digestion” (column 17, lines 48-55). Thus, contrary to applicants’ assertion, Thompson et al. present a method for normalizing the representation of organisms to allow equal representation of the DNA from all organisms in the sample, or, as described by Thompson, a method for amplifying the DNAs of those organisms whose quantities are low in an attempt to construct “DNA libraries that are representative of the genetic information of the donor organisms.”

### ***Claim Rejections - 35 USC § 103***

[17] The rejection of claim 23 under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. is maintained for the reasons of record (¶¶ [14] and [15] of the Office action mailed 10/1/2004 and ¶ [12] of the Office action mailed 4/6/2004) and for the reasons stated below.

RESPONSE TO ARGUMENT: Applicants argue Thompson et al. does not teach all limitations of the claim (citing their argument addressing the rejection under 35 USC 102(b)) as claim 23 depends from claim 19. Applicants argue Thompson et al. fail to motivate one to modify Thompson et al. to arrive at the claimed invention because

Art Unit: 1652

Thompson et al. is allegedly devoted to preparation and screening of combinatorial gene libraries. Applicants argue the combination of references does not teach or motivate a skilled artisan to “normalize” the representation of organisms and further argue that the disclosure of “reconstituted metabolic pathways” does not suggest and would not motivate one to look to the DNA of a single donor organism for detection of a “naturally occurring” biomolecule or bioactivity of interest. Applicants' argument is not found persuasive.

For reasons presented above, it is the examiner's position that Thompson et al. teaches all limitations of claim 19, including a method of “normalization” to construct “DNA libraries that are representative of the genetic information of the donor organisms.” Applicants argue that Thompson discloses using uncultured organisms, however, clearly the method of Thompson et al. encompasses the use of cultured and uncultured organisms (see, e.g., column 14). It is acknowledged that Thompson et al. do not specifically teach the use of at least  $2 \times 10^6$  clones to practice their method. However, Thompson et al. teach a formula for calculating the number of clones required to represent the entire genome of donor organisms (column 27). While Thompson et al. suggest using  $5 \times 10^5$  clones for bacterial species, the method of Thompson et al. is not limited to screening the genomes of bacterial species and encompasses eukaryotic species, such as yeast, plant, and mammalian cells, which have a significantly larger genomic sequence. Thus, one of ordinary skill in the art, in view of the teachings of Thompson et al. regarding the number of clones required to represent the entire genome of an organism or organisms, would have been motivated to use *at least* this

Art Unit: 1652

many clones in order to represent the genomes of eukaryotic species. Thus, in view of the teachings of Thompson et al., claim 23 would have been obvious to one of ordinary skill in the art at the time of the invention.

**[18]** The rejection of claims 30-32 and 34 under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Miao et al. (Biotechnol Bioengineer 42:708-715) is maintained for the reasons of record (§§ [16] and [17] of the Office action mailed 10/1/2004 and § [13] of the Office action mailed 4/6/2004) and for the reasons stated below.

RESPONSE TO ARGUMENTS: Applicants argue Thompson et al. does not teach all limitations of the claims (citing their arguments addressing the rejection under 35 USC 102(b) and 35 USC 103(a) as being unpatentable over Thompson et al.) Applicants argue that, in addition to those previous arguments, Miao et al. fails to remedy the alleged deficiencies of Thompson et al. Applicants argue Miao et al. are silent regarding screening a library containing a plurality of clones obtained from one or more organisms wherein each clone contains DNA from one organism in the multispecies population. Applicants argue the combination of references does not teach or motivate a skilled artisan to “normalize” the representation of organisms. Applicants argue that even if one were motivated to combine the cited references, there is no reasonable expectation of success for adapting the technique of Miao et al. to the method of Thompson et al. Applicant's argument is not found persuasive.

For reasons presented above, it is the examiner's position that Thompson et al. teaches all limitations of claim 19, including a method of “normalization” to construct

"DNA libraries that are representative of the genetic information of the donor organisms." Based on the motivation for using C12FDG as a fluorogenic substrate to detect those clones expressing beta-galactosidase by FACS, i.e., to prevent substrate leakage as taught by Miao et al. (page 708, right column), one would have been motivated to use the substrate of Miao et al. to practice the method of Thompson et al. As Miao et al. demonstrate the use of their substrate in screening a large number of clones, one would have had a reasonable expectation of success for using the substrate of Miao et al. in practicing the method of Thompson et al. Thus, in view of the teachings of Thompson et al. and Miao et al., claims 30-32 and 34 would have been obvious to one of ordinary skill in the art at the time of the invention.

**[19]** The rejection of claim 33 under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Miao et al. as applied to claims 30-32 and 34 above, and further in view of Hirata et al. (US Patent 4,861,718) is maintained for the reasons of record (¶¶ [18] and [19] of the Office action mailed 10/1/2004 and ¶ [14] of the Office action mailed 4/6/2004) and for the reasons stated below.

RESPONSE TO ARGUMENT: Applicants argue Thompson et al. in view of Miao et al. does not anticipate or render obvious claims 19 and 32 from which claim 33 is dependent upon. Applicants argue Hirata et al. fail to remedy the alleged deficiencies of Thompson et al. and Miao et al. and Hirata et al. are silent regarding screening a library containing a plurality of clones obtained from one or more organisms wherein each clone contains DNA from a single one of the donor organisms. Applicants argue that the cited references fail to motivate one to modify the combined disclosures to arrive at

Art Unit: 1652

such a method at any temperature. Applicants argue the combination of references does not teach or motivate a skilled artisan to “normalize” the representation of organisms. Applicants argue that even if one were motivated to combine the cited references, there is no reasonable expectation of success for practicing the claimed method. Applicants’ argument is not found persuasive.

For reasons presented above, it is the examiner’s position that Thompson et al. teaches all limitations of claim 19, including a method of “normalization” to construct “DNA libraries that are representative of the genetic information of the donor organisms.” Further, Thompson et al. in view of Miao et al. teach all limitations of claims 30-32 and 34. As previously stated, the combination of references clearly teaches all limitations of the claims and, contrary to applicants’ assertion, provides a reasonable expectation of success for practicing the claimed method. Thus, in view of the teachings of Thompson et al., Miao et al., and Hirata et al., claim 33 would have been obvious to one of ordinary skill in the art at the time of the invention.

**[20]** The rejection of claims 21, 36, 40, and 46 under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Minshull et al. (US Patent 5,837,458) is maintained for the reasons of record (¶¶ [20] and [21] of the Office action mailed 10/1/2004 and ¶ [15] of the Office action mailed 4/6/2004) and for the reasons stated below.

**RESPONSE TO ARGUMENT:** Applicants incorporate their arguments regarding the rejection of claims 19-20 under 35 USC 103(a) addressing the reference of Thompson et al. Applicants argue the combination of references does not teach or

suggest procedures for normalizing the representation of organisms. Applicants argue that even if one were motivated to combine the cited references, there is no reasonable expectation of success for practicing the claimed method. Applicants' argument is not found persuasive.

For reasons presented above, it is the examiner's position that Thompson et al. teaches all limitations of claims 19-20, including a method of "normalization" to construct "DNA libraries that are representative of the genetic information of the donor organisms." Further, Thompson et al. and Minshull et al. teach all limitations of claims 21, 36, 40, and 46. In view of the teachings of Thompson et al. and Minshull et al., one of ordinary skill in the art would have been motivated to practice the claimed invention and, provided the guidance of Thompson et al. and Minshull et al., one of ordinary skill in the art would have had a reasonable expectation of success for practicing the claimed invention.

**[21]** The rejection of claim 41 under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Minshull et al. (US Patent 5,837,458) as applied to claims 21, 36, 40, and 46 above, and further in view of Loveland et al. (Appl Environ Microbiol 60 :12-18) is maintained for the reasons of record (¶¶ [22] and [23] of the Office action mailed 10/1/2004 and ¶ [16] of the Office action mailed 4/6/2004) and for the reasons stated below.

**RESPONSE TO ARGUMENTS:** Applicants incorporate their arguments regarding the rejection of claims 19 and 40 under 35 USC 103(a) addressing the references of Thompson et al. and Minshull et al. Applicants argue the combination of

Art Unit: 1652

references does not teach or motivate a skilled artisan to “normalize” the representation of organisms using naturally occurring DNA. Applicants argue the combined references are silent regarding normalizing the representation of DNA. Applicants argue Loveland et al. does not teach or suggest isolating a polynucleotide encoding an enzyme as suggested by the examiner. Applicants argue that even if one were motivated to combine the cited references, there is no reasonable expectation of success for practicing the claimed method. Applicants’ argument is not found persuasive.

For reasons presented above, it is the examiner’s position that Thompson et al. and Minshull et al. teach all limitations of claims 19 and 40, including a method of “normalization” to construct “DNA libraries that are representative of the genetic information of the donor organisms.” Further, Thompson et al., Minshull et al., and Loveland et al. teach all limitations of claim 41. Regarding applicants’ argument that Loveland et al. does not teach or suggest isolating a polynucleotide encoding an enzyme, it is noted that Loveland et al. disclose [w]e have cloned three genes encoding beta-galactosidase activities for isolate B7...” referring to genes encoding those beta-galactosidases characterized in the reference of Loveland et al. (p. 17, right column). In view of the teachings of Thompson et al., Minshull et al., and Loveland et al., one of ordinary skill in the art would have been motivated to practice the claimed invention and, provided the guidance of Thompson et al., Minshull et al., and Loveland et al., one of ordinary skill in the art would have had a reasonable expectation of success for practicing the claimed invention.

***Claim Rejections - Double Patenting***

[22] The provisional obviousness-type double patenting rejection of claims 19-41 and 43-46 as being unpatentable over claims 1-2, 7-23, 26-28, 33-44, 47-49, 51, and 54-55 of US non-provisional application 09/848,095 and the provisional obviousness-type double patenting rejection of claim 19 as being unpatentable over claim 1 of US non-provisional application 10/145,280 are maintained for the reasons of record (¶¶ [24] and [25] of the Office action mailed 10/1/2004). Applicants do not dispute the examiner's position.

[23] It is noted that numerous co-pending applications have been filed and patents have issued disclosing subject matter that is related to the instant application. In the interest of compact prosecution and to allow the examiner to focus his effort on more substantive issues, the examiner requests that applicants identify any patent(s) and/or co-pending application(s) that claim(s) subject matter that may necessitate a double patenting rejection, an obviousness-type double patenting rejection, a provisional double patenting rejection, or a provisional obviousness-type double patenting rejection, applicants should identify the claims of the patents and/or co-pending applications that claim identical or similar subject matter, identify the corresponding claims of the instant application, and take the appropriate action, e.g., cancel claims to preempt a statutory double patenting rejection and/or file a terminal disclaimer to preempt an obvious-type double patenting rejection.

***Conclusion***



**[24]** Status of the claims:

Claims 19-41 and 43-46 are pending.

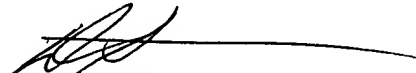
Claims 19-41 and 43-46 are rejected.

No claim is in condition for allowance.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Steadman, whose telephone number is (571) 272-0942. The Examiner can normally be reached Monday-Thursday and alternate Fridays from 7:30 am to 5:00 pm. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (571) 272-0928. The FAX number for submission of official papers to Group 1600 is (571) 273-8300. Draft or informal FAX communications should be directed to (571) 273-0942. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Art Unit receptionist whose telephone number is (703) 308-0196.

  
**DAVID J. STEADMAN, PH.D.**  
**PRIMARY EXAMINER**